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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON D. C. 20554

In the Matter of	)	
	)	
	)	
Amendment of Section 2.106 of	)	
the Commission's Rules to	)	ET Docket No. 93-59
Allocate Spectrum for	)	RM-8092
Wind Profiler Radar Systems	)	

To: The Commission

COMMENTS

1. The Telecommunications Industry Association (TIA) Mobile & Personal Communications Consumer Radio Section ("the Section")[1] hereby offers its Comments on the above-captioned matter. One component of the *Notice* issued by the Commission[2] in this matter is a *Notice of Inquiry* requesting comment on the possibility of operating Wind Profiler Radar Systems in the 902-928 MHz band. Since a number of the Section's members have announced products operating in the 902-928 MHz band under §15.247 of the Commission's Rules, the Section feels compelled to comment on this matter.

1. Formerly the TIA "Personal Communications Section."
2. *Notice of Proposed Rule Making and Notice of Inquiry*, FCC 93-136, adopted March 10, 1993, released April 1, 1993.

2. The most recent change to §15.247 of the Commission's Rules, which governs the operation of unlicensed spread-spectrum devices using the 902-928 MHz band, occurred in June 1990, when the Commission adopted a *Report and Order* amending Parts 2 and 15 and terminating the proceeding in Gen. Docket No. 89-354.[3] That *Report and Order* clarified the requirements governing direct sequence spread spectrum systems, and modified those applying to frequency hopping systems to allow a wider transmission bandwidth. During the three years since the issuance of the *Report and Order*, many companies have completed or nearly completed products designed to those rules. As a result, a substantial proliferation of Part 15 devices operating in the 902-928 MHz band is imminent.

3. Once Part 15 devices are sold to customers, there is no practical way to control their locations. Therefore, even though their transmit power levels will be relatively low, they can be positioned sufficiently near the receive antenna of a wind profiler system to cause interference. This interference will add to the interference that can be expected from a number of other applications authorized to use the 902-928 MHz band, such as ISM devices, amateur radio transmitters, and automatic vehicle monitoring systems. It is the potential effect on wind profilers of the interference generated by Part 15 devices and these other applications that concerns the Section.

4. Part 15 devices must not cause interference to a primary user. However, as a practical matter, a wind profiler system operator may be unable to identify Part 15 interference sources and require their operators to discontinue transmissions or modify their characteristics to eliminate the interference without an inordinate amount of effort. Many Part 15 users will be residential consumers with irregular,

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3. *Report and Order* in the Matter of Amendment of Parts 2 and 15 of the Rules with regard to the operation of spread spectrum systems, FCC 90-233, Gen. Docket No. 89-354, adopted June 14, 1990, released July 9, 1990.

unpredictable usage patterns, and there often may be multiple users within range of a receiver site. This problem may be aggravated by the spread-spectrum characteristics of the Part 15 devices operating under §15.247, which tend to make a transmitter more difficult to isolate. Further, the relatively high power allowed (up to 1 watt of radiated RF power) will allow Part 15 devices users considerable range and mobility, so some of the interfering transmitters may not be stationary. Finally, as more customers purchase Part 15 devices, new interference sources will continue to appear. These characteristics mean that a wind profiler operator might have considerable difficulty in locating the interference sources, and even if these sources could be clearly identified, in permanently eliminating the interference.

5. The Section also notes that past experiences which might suggest a lack of interference in the 902-928 MHz band are not necessarily indicative of the future. Experimental systems may have been operated for years in the band without significant interference. However, over the next several years, the penetration of Part 15 devices in this band will grow rapidly, compounding a potential interference problem to systems that are not robust. While on the surface, it would appear as though Part 15 devices and wind profiler systems should be able to coexist due to separated locations and antenna directivity, it is unclear whether these factors can be relied upon to guarantee that harmful interference will not occur.

6. If the wind profilers are to be used for such critical applications as gathering wind shear data for purposes of planning aircraft flight paths, high reliability would seem to be essential. Anything that might jeopardize that reliability, and the effectiveness of potential solutions (such as the RF screens mentioned in the *Notice* in connection with the 449 MHz band) must be investigated in detail before wind profilers are deployed

7. In conclusion, the Section recommends that prior to authorization of any portion of the 902-928 MHz band for use by wind profilers, extensive analysis and testing of potential interference scenarios from Part 15 devices as well as other applications should be conducted, and measures to mitigate the effects of the interference should be investigated. Because the next several years will see a significant increase in the penetration of Part 15 devices in that band, and hence in the potential for unpredictable and uncontrollable interference into systems that are not designed to resist it, such a cautious approach is required in the public interest.

Respectfully submitted,

TELECOMMUNICATIONS INDUSTRY ASSOCIATION

MOBILE & PERSONAL COMMUNICATIONS CONSUMER RADIO SECTION

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